STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
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September 7, 2011

Bob Zeigler, SEPA Coordinator
Department of Fish & Wildlife
600 Capital Way North
Olympia, WA 98501-1091

Re: Manastash Creek Flood Damage Repair

Dear Mr. Zeigler:

Thank you for the opportunity to comment on the determination of nonsignificance for the Manastash Creek Flood Damage Repair, proposed by Clayton R. Snyder. We have reviewed the documents and have the following comments.

Impaired Water Comments:

The Detailed Implementation Plan (DIP) for the Upper Yakima River Basin Suspended Sediment, Turbidity and Organochlorine Pesticide TMDL (Ecology, October 2003) requires that river sediment not exceed 10 NTU (measured turbidity as nephelometric units). Fish habitat becomes affected above 10 NTU. The TMDL was a collaborative effort by agencies and individual stakeholders. Streambank instability was identified as the general primary source of sedimentation and turbidity. Specific sources of streambank instability identified in the DIP include:

- Damaged riparian areas can start self-perpetuating erosion of streambanks,
- High winter flows can remove large sections of stream banks, exposing vertical faces of unvegetated banks to erosive forces. High winter flows are naturally occurring in many areas of the Upper Yakima (pg 3, DIP 2003).

The DIP identifies homeowners with waterfront property as among the responsible parties for preventing and reducing sedimentation under the TMDL, and specifically requires homeowners to:

- Avoid actions that will cause streambank destabilization or erosion, or will otherwise add sediment to area waterways. Implement sediment control BMPs. (pg 6, DIP 2003)

NTU limits are set by measurement of background turbidity, and allowing a 5 NTU above background levels. The TMDL requirement states:

- Shall not exceed 5 NTU over background turbidity when the background turbidity is 50 NTU or less, or have more than a 10% increase in turbidity (pg 7, Upper Yakima River Basin Suspended Sediment, Turbidity and Organochlorine Pesticide Submittal, August 2002)
- 2.7 NTU was the median value for background monitoring (Ecology, June 2008)

Ideally, all Manastash Creek crossings would be designed by an engineer in consultation with a river morphologist, and the engineering firm would obtain a copy of the Upper Yakima River Basin Suspended Sediment and Organochlorine Pesticide TMDL DIP to review guidelines for river stabilization and restoration. Although this might not be feasible for the current proposal timeline, it is imperative that progress be made on altering the repeating cycle of floods followed by sub-standard repairs that set the system up for more damage during the next flood, leading to chronic sedimentation problems.

Shoreline Master Program Compatibility Comments:

In order for this project to be consistent with the Shoreline Management Act and the Kittitas County Shoreline Master Plan, the applicant should be made aware that the following issues raised within the KCSMP will need to be resolved. (When a shoreline exemption is issued by the County, the applicant still has the obligation to assure that the project is consistent with the following KCSMP elements):

Dredging (Section 24)
1) All four Environments shall be subject to the following:
a. Dredging shall be a conditional use. (Regulations in Section 39 – Conditional Uses applicable)

Flood Plains (Section 25)
(3) Any use activity involving levees, fills, structures, or other features which will individually or collectively significantly increase flood flows, heights, or damages shall be prohibited.

(5) A structure or structures, if permitted, shall be constructed and placed on the building site so as to offer the minimum obstruction of the flow of floodwaters.

Roads, Railroads and Bridges (Section 34)
(3) Roads, railways, and bridge structures shall be designed so that minimum flood debris will be trapped by the structure.
(4)(b) Erodible cut, filled and side cast slopes when allowed within 100 feet of the ordinary high water mark shall be protected by planting or seeding with appropriate ground cover.
(4)(c) Cross culverts for relief of ditch drainage shall be installed at all low points in permanent roadways.
(6) Bridge Construction: (a) Bridges shall be designed and built so that they will not restrict or interfere with high water flows and be high enough to allow all potential debris to pass under.
(6)(b) Any disturbed bank material shall be removed from the channel and any soils exposed by bridge construction shall be protected from erosion by planting or seeding with appropriate ground cover, by rip-rap or by other means.
(6)(c) At least one end of each stringer bridge shall be tied to prevent it from being washed away during high water.

The provisions of WAC 173-27-080 will apply to the bridge's reconstruction status under shorelines (whether it is a conforming or non-conforming use) because the KCSMP is silent on the matter. This WAC section provides for how much damage a structure can sustain and still be buildable, as well as time constraints on the ability to rebuild a use for which a permit was not originally obtained. Ecology understands that an engineered drawing for this bridge circa 1992 exists. This drawing should be presented in permit application documents, and information about whether or not the bridge was permitted by the County in the past should also be included.

General Water Quality and Flood Comments:

The proposed project actions and activities have the potential to do significant harm to Manastash Creek and include (but are not limited to):

- Removing bed load in the stream channel(s) above, under and below bridges
- Restricting the width of the flood way and flood channels by filling the stream channel, narrowing it at bridge footing placement
- Armoring the stream banks to reduce or restrict the normal stream functional activity
- Restricting stream access to floodway areas thereby reducing access by fish species to backwater resting areas

- Removing stream bank vegetation

The proposed project, if approved in its current form, will allow many of the activities listed above. These activities should be considered under RCW 43.21C.030(2e) and require additional investigation and study as defined by SEPA guidance. The following issues should be addressed:

1. Proposed restoration of Manastash Creek Flood damage as described with replacement of approach fill does not appear to deal with the on-going need for the Manastash Creek channel to migrate in this location under high flow conditions. It appears that this proposal will restore a structural condition that will fail again in the future under similar or lower flow conditions. Information on stream flow capacity that can be safely passed by the current bridge proposal and the location of the newly formed OHWM should be included for review in the SEPA documents.

2. Final bridge configuration plans should provide measures to eliminate bridge approach fill, and the amount of gravel below the OHWM that needs to be removed. Bridge design should be able to accommodate 100-year flood flows, and the configuration should accommodate on-going normal stream bedload transport downstream. Bridge approach materials should ideally be kept entirely outside the floodway footprint.

3. While it appears that the intent of this proposal is to be permanent reconstruction, the threshold determination should clearly indicate whether any proposed construction is a temporary measure or a permanent measure.

4. If the proposed project is intended to be temporary, Kittitas County will need to issue a flood hazard permit that includes dates by which an application for permanent construction shall be made and the temporary improvements shall be permanently permitted or removed. The stream alteration requires notification of adjacent communities and the Department of Ecology. The flood carrying capacity of the stream cannot be reduced as an effect of the alteration.

5. A permanent project will require an engineering analysis demonstrating that the bridge will not cause any rise in the base flood elevation, provide 100 year stream volume passage, and allow normal bedload movement without restricting the creeks transport ability. The basis for the engineering analysis will be the current Flood Insurance Study applicable to Manastash Creek.

The applicant should provide information about why other options for reconstruction of the

bridge which would accommodate the new location of the OHWM and the current bedload location are not possible. Options which would clearly increase channel capacity could include the addition of a double bridge span, removal of approach fill, use of pilings instead of concrete footing in the stream bed, removal of one bridge and access over a single bridge that has shared access etc. Information about how much channel capacity is increased by removal of the side channel plug downstream should be discussed.

If you have any questions or would like to respond to these comments, please contact Catherine Reed at (509) 575-2616.

Sincerely,

Gwen Clear

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Environmental Review Coordinator
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